

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the present application:

1. (Original) A method of liquefying starch-containing material, wherein the method comprises the steps of

(a) treating the starch-containing material with a bacterial alpha-amylase at a temperature around 70-90°C for 15-90 minutes,

(b) treating the material obtained in step (a) with an alpha-amylase at a temperature between 60-80°C for 30-90 minutes.

2. (Original) The method of claim 1, wherein the starch-containing material is jet-cooking at 90-120°C, preferably around 105°C, for 1-15 minutes, preferably for 3-10 minute, especially around 5 minutes, before step (a).

Claims 3-4. (Canceled)

5. (Currently amended) The method of ~~any of the claims 1-5~~ claim 1, wherein the starch-containing material is selected from the group consisting of corn, cob, wheat, barley, rye, milo and potatoes; or any combination of these.

Claims 6-8. (Canceled)

9. (Currently amended) The method of ~~any of the claims 1-8~~ claim 1, further comprising prior to step (a) the steps of;

i) milling of starch-containing material;

ii) forming a slurry comprising the milled material and water.

10 (Original). The method of any of the claim 9, wherein the milling step is a dry milling step.

Claims 11-12. (Canceled)

13. (Currently amended) The method of ~~claims 1-12~~ claim 1, wherein the bacterial alpha-amylase in step (a) is a *Bacillus* alpha-amylase, ~~preferably derived from *Bacillus stearothermophilus* alpha-amylase or a variant with the mutations: I181\*+G182\* especially I181\*+G182\*+N193F.~~

14. (Currently amended) The method of ~~claims 1-13~~ claim 1, wherein the alpha-amylase is step (b) is an acid alpha-amylase, ~~preferably an acid fungal alpha-amylase, preferably derived from *Aspergillus* spp. preferably *Aspergillus niger* or *Aspergillus oryzae*.~~

15. (Currently amended) The method of ~~any of claims 1-14~~ claim 14, wherein the acid alpha-amylase is an alpha-amylase having an amino acid sequence which has at least 70% identity to SEQ ID NO:1 ~~preferably at least 75%, 80%, 85% or at least 90%, e.g., at least 95%, 97%, 98%, or at least 99% identity to SEQ ID NO:1.~~

Claim 16. (Canceled)

17. (Currently amended) The method of ~~claims 1-16~~ claim 1, wherein the mash obtained after step (b) has a DE value of above 16, ~~preferably above 18, especially above 20, such as a DE value in the range from 16 to 30, preferably in the range from 18 to 25.~~

18. (Currently amended) A process of producing ethanol from starch-containing material by fermentation, said process comprises:

- (i) liquefying said starch-containing material as defined in ~~any of claims 1 to 17~~ claim 1;
- (ii) saccharifying the liquefied mash obtained;
- (iii) fermenting the material obtained in step (ii).

19. (Currently amended) The process of ~~any of claim 18~~ claim 18, further comprising recovery of the ethanol.

20. (Currently amended) The process of ~~any of claims 18 or 19~~ claim 18, wherein the saccharification and fermentation is carried out as a simultaneous saccharification and fermentation process (SSF process).

Claims 21-22. (Canceled)

23. (Currently amended) The process of ~~claims 18 or 19~~ claim 18, wherein the fermentation is carried out with a yeast~~micro-organism is a yeast, such as Saccharomyces spp., preferably Saccharomyces cerevisiae.~~

24. (Currently amended) The process of ~~any of the claims 18-23~~ claim 18, wherein the fermentation is carried out in the presence of a carbohydrate-source generating enzyme.[[.]]

25. (Currently amended) The process of claim 24, wherein the carbohydrate-source generating enzyme is a glucoamylase~~, preferably derived from a strain of Aspergillus, preferably Aspergillus niger or a strain of Talaromyces, especially Talaromyces emersonii.~~

26. (Currently amended) The process ~~according to any of claims 18-25~~ of claim 18, said process comprising the steps of;

- 1) liquefying starch-containing material ~~in accordance with the liquefaction method of claims 1-17;~~
- 2) liquefying the material obtained in step 1) in the presence of an alpha-amylase having an amino acid sequence which has at least 70% identity to SEQ ID NO:1; and
- 3) saccharifying the material obtained in step 2); and
- 4) fermenting to produce ethanol;

wherein the steps 1), 2), 3) and 4) is performed in the order 1), 2), 3), 4) or wherein 4) is performed simultaneously to or following 3).

27. (Currently amended) The ~~method~~ process of claims 26, wherein the mash obtained after step 2) has a DE value of above 16~~, preferably above 18, especially above 20, such as a DE value in the range from 16 to 30, preferably in the range from 18 to 25.~~

28. (New) The method of claim 13, wherein the bacterial alpha-amylase is derived from a strain of *Bacillus stearothermophilus*.

29. (New) The method of claim 14, wherein the acid alpha-amylase is an acid fungal alpha-amylase.

30. (New) The method of claim 29, wherein the acid fungal alpha-amylase is derived from *Aspergillus* spp.

31. (New) The method of claim 30, wherein the acid fungal alpha-amylase is derived from *Aspergillus niger* or *Aspergillus oryzae*.

32. (New) The method of claim 15, wherein the acid alpha-amylase is an alpha-amylase having an amino acid sequence which has at least 80% identity to SEQ ID NO:1.

33. (New) The method of claim 15, wherein the acid alpha-amylase is an alpha-amylase having an amino acid sequence which has at least 90% identity to SEQ ID NO:1.

34. (New) The method of claim 15, wherein the acid alpha-amylase is an alpha-amylase having an amino acid sequence which has at least 95% identity to SEQ ID NO:1.

35. (New) The method of claim 23, wherein the yeast is derived from a strain of *Saccharomyces* spp.